

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER No. 88 - 048

SITE CLEANUP REQUIREMENTS FOR:

CLIFFORD B. HUNTER, INC. (formerly HUNTER TECHNOLOGY CORPORATION),  
HUNTER TECHNOLOGY ACQUISITION COMPANY doing business as HUNTER  
TECHNOLOGY CORPORATION,  
MONSANTO COMPANY, and  
CAMSI IV

for the property located at:

2710 LaFayette Street  
Santa Clara  
Santa Clara County

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Monsanto Company (formerly Monsanto Plastics and Resins Company) owned 25 acres of property in Santa Clara, 8 acres of which were used to manufacture plastics and resins from 1950 until 1983. In 1968, Monsanto Company leased a building on this property (985 Walsh Avenue) to Hunter Technology Corporation who manufactured printed circuit boards until 1983. In 1983, Monsanto Company negotiated an exchange of the property with TICOR Title Insurance. TICOR sold the property to Ronald N. Sakauye who sold the property to Kimball Small Properties in 1984. Kimball Small Properties held title to the property until the CAMSI IV partnership was formed in 1985. CAMSI IV currently owns the property. All buildings were demolished when Monsanto and Hunter vacated the site. No new facilities have been constructed and the site exists as an open field.
2. Monsanto disposed liquid waste (water with some salts mixed with amino and phenolic resins) in a two acre evaporation pond from the mid-1960s until 1975 and solid waste (resins, construction debris and domestic refuse) in seven trenches just north of Walsh Avenue during the 1950s and 1960s. The Regional Board adopted Waste Discharge Requirements Order No. 85-93 in July 1985 requiring Monsanto and Kimball Small to investigate and remediate chemicals, primarily HMBA, originating from Monsanto's evaporation pond and buried trenches. This Order addresses the investigation and remediation of volatile organic chemicals (VOC) and other pollutants on Monsanto's former property located east of the evaporation pond and buried trenches.
3. In order to define the extent of groundwater pollution in compliance with Order No. 85-93, Monsanto installed three monitoring wells off-site (downgradient from their facility) in

April 1986. One well located downgradient and off-site from Monsanto's and Hunter's former facilities detected 2200 ppb trichloroethene (TCE), 230 ppb trans 1,2 dichloroethene and lower concentrations of 1,1,1 trichloroethane (TCA), 1,1 dichloroethane (DCA), and 1,1 dichloroethene (DCE). (These chemicals are collectively referred to as volatile organic chemicals or VOCs.)

4. Chemical usage information supplied by Monsanto indicates that they did not use VOCs in their processes although low concentrations of VOCs (less than 75 ppb) were detected in monitoring wells installed in the vicinity of Monsanto's former evaporation pond and buried trenches. (Monsanto's evaporation pond and buried trenches were located west of the buildings occupied by Monsanto and Hunter and the area where high concentrations of VOCs have been detected in groundwater - Site Map.) Hunter did use VOCs and operated a sump where rinse wastewaters were temporarily stored.
5. Unsaturated soil samples have been obtained at twelve locations on-site to identify possible source areas. In an area formerly occupied by Hunter, 1 mg/kg TCE was detected in one soil sample. Lower concentrations of TCE (up to 0.290 mg/kg) were also detected in this area and in other areas. (Low concentrations of VOCs in unsaturated soil samples may be the result of vapor transport from polluted groundwater and thus may not be indicative of source areas.) One shallow soil sample in the vicinity of one of Hunter's chemical storage areas detected 17,800 mg/kg copper, 1,600 mg/kg lead, and 210 mg/kg nickel. The concentrations of copper and lead are above the Toxic Threshold Limit Concentration for these metals (2,500 mg/kg for copper and 1,000 mg/kg for lead) and thus the soil in this area is considered hazardous waste. Propanone was also detected at this location at 1 mg/kg. Lastly, a strong odor was detected in a soil boring drilled near Monsanto's tank farm, the source of which was not identified during soil analysis. Additional soil sampling and analyses are required: 1) immediately adjacent to former sewer lines, if possible, and the sump to determine whether these units were sources of VOC pollution; 2) to determine the extent of metals contamination; and 3) to identify the chemicals causing the odor near Monsanto's former tank farm.
6. Monsanto recently installed six monitoring wells to determine the lateral extent of groundwater pollution at the site. The results revealed that groundwater in the upgradient portion of the site contains up to 230 ppb TCE and that groundwater on-site contains up to 2300 ppb TCE. Thus, a major source of TCE pollution exists on-site. The plume extends beyond the property boundaries and additional monitoring wells are required to determine the lateral and vertical extent of groundwater pollution.
7. The primary source of VOCs detected in the groundwater on-site

appear to originate from the site because: 1) up to 2300 ppb TCE were detected on-site compared to 230 ppb TCE at the upgradient portion of the site; 2) 1000 ug/kg TCE were detected in an unsaturated soil sample near Hunter's former facility; 3) VOCs were used by Hunter who also utilized a subsurface unit; 4) wells installed between the site and a potential upgradient source (Technical Coatings Company) did not detect TCE. Although it is possible that the concentrations of TCE detected on the upgradient portion of the site resulted from poor chemical handling practices on-site or leaky sewer pipes, the Regional Board staff will continue to investigate the possibility of additional contributing sources.

8. Clifford B. Hunter, Inc. (hereinafter referred to as a discharger) is a discharger because releases of the types of VOCs used in Hunter Technology Corporation's industrial processes have been found in the soil and groundwater in the area of their former facility. Hunter Technology Acquisition Company, doing business as Hunter Technology Corporation (hereinafter referred to as a discharger), is a discharger because Hunter Technology Acquisition Company may share some liability for releases which occurred from Hunter Technology Corporation and because the solvency of Clifford B. Hunter, Inc. has not been determined. Monsanto (hereinafter referred to as a discharger) is a discharger because of their ownership and occupancy of the property for thirty three years during which releases of chemicals have occurred from facilities occupied by Monsanto or their tenant. CAMSI IV (hereinafter referred to as a discharger) is a discharger because they are the current owner of the property where these releases occurred and continue to occur.
9. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface and groundwaters.
10. The existing and potential beneficial uses of the groundwater underlying and adjacent to the facility include:
  - a. Industrial process water supply
  - b. Industrial service water supply
  - c. Agricultural water supply
  - d. Municipal and domestic supply
11. The dischargers have caused or permitted, and threaten to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.
12. This action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

13. Interim containment and cleanup measures need to be implemented to alleviate the threat to the environment posed by soil pollution and the continued migration of the groundwater plume of VOCs and to provide a substantive technical basis for designing and evaluating the effectiveness of final cleanup alternatives.
14. The Board has notified the dischargers and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.
15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.
2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of soil or groundwater containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. Clifford B. Hunter, Inc. (Hunter), Hunter Technology Acquisition Company (HTAC), and Monsanto shall conduct monitoring activities as needed to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution as set out in this Order. Should monitoring results show evidence of plume migration, additional plume characterization of pollutant extent may be required. If the Executive Officer determines and notifies CAMSI IV that Hunter, HTAC and Monsanto have failed to comply with this paragraph, CAMSI IV, as landowner, shall comply with this Specification within ninety days. Nothing in this paragraph is intended nor shall be construed as relieving

Hunter, HTAC and Monsanto of their liability.

C. PROVISIONS

1. Hunter, HTAC and Monsanto shall submit to the Board acceptable monitoring program reports containing results of work performed according to a program to be prepared by the Board's Executive Officer. If the Executive Officer determines and notifies CAMSI IV that Hunter, HTAC and Monsanto have failed to comply with this paragraph, CAMSI IV, as landowner, shall comply with this Provision within ninety days. Nothing in this paragraph is intended nor shall be construed as relieving Hunter, HTAC and Monsanto of their liability.
2. Hunter, HTAC, and Monsanto shall comply with Prohibitions A.1., A.2., and A.3., and Specifications B.1. and B.2. above according to the time schedule and tasks below. If the Executive Officer determines and notifies CAMSI IV that Hunter, HTAC and Monsanto have failed to comply with this paragraph, CAMSI IV, as landowner, shall comply with this Provision within ninety days. For subsequent, related tasks, CAMSI IV will have ninety additional days beyond the dates specified in this Order. Nothing in this paragraph is intended nor shall be construed as relieving Hunter, HTAC and Monsanto of their liability.

COMPLETION DATE/TASK:

- a. 1) COMPLETION DATE: April 4, 1988

**TASK: SAMPLE EXISTING WELLS OW-1 - OW-6:**

Submit a technical report acceptable to the Executive Officer containing a proposal to sample wells OW-1 - OW-6 using EPA Method 8240 for priority and non-priority pollutants, EPA Method 8270 for extractable priority pollutants and a test for all heavy metals.

- 2) COMPLETION DATE: May 2, 1988

**TASK: COMPLETION OF SAMPLING MONITORING WELLS:**

Submit a technical report acceptable to the Executive Officer containing the results of sampling monitoring wells OW-1 - OW-6.

- b. 1) COMPLETION DATE: April 13, 1988

**TASK: IDENTIFY SOURCES AND CHARACTERIZE SOIL POLLUTION:**

Submit a technical report acceptable to the Executive Officer containing a proposal to identify all pollution sources on-site and to define the horizontal and vertical extent of soil pollution. Specifically, the dischargers shall determine the location of the former sump and, if possible, former sewer lines to determine whether they

are sources of VOC pollution, the extent of metals pollution, and the source and extent of odoriferous pollutants near Monsanto's former tank farm.

2) COMPLETION DATE: July 5, 1988

**TASK: COMPLETION OF IDENTIFICATION AND**

**CHARACTERIZATION:** Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.b.1).

c. 1) COMPLETION DATE: April 13, 1988

**TASK: GROUNDWATER POLLUTION CHARACTERIZATION:**

Submit a technical report acceptable to the Executive Officer containing a proposal to define the horizontal and vertical extent of groundwater pollution.

2) COMPLETION DATE: July 5, 1988

**TASK: COMPLETION OF GROUNDWATER CHARACTERIZATION:**

Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.c.1).

d. 1) COMPLETION DATE: July 26, 1988

**TASK: FURTHER GROUNDWATER POLLUTION CHARACTERIZATION:**

If the extent of groundwater pollution is not adequately defined by the activities performed for Task 2.c, submit a technical report acceptable to the Executive Officer containing a proposal to define the lateral and vertical extent of groundwater pollution.

2) COMPLETION DATE: October 24, 1988

**TASK: COMPLETION OF GROUNDWATER CHARACTERIZATION:**

Submit a technical report acceptable to the Executive Officer containing the results of the investigation to define the extent of groundwater pollution.

e. COMPLETION DATE: August 5, 1988

**TASK: HYDROGEOLOGIC TESTING:** Propose hydrogeologic tests to be performed onsite which are necessary in order to evaluate interim cleanup alternatives, e.g., pump tests, soil venting, etc.

f. 1) COMPLETION DATE: October 3, 1988

**TASK: INTERIM REMEDIAL ACTIONS:** Submit a technical report acceptable to the Executive Officer which contains an evaluation of interim remedial alternatives based on the results of hydrogeologic testing identified in the technical report submitted for Task 2.e, a recommended plan for interim remediation onsite, and an implementation time schedule. This report shall evaluate the removal and/or cleanup of polluted soils; evaluate alternative hydraulic control systems to contain and to initiate cleanup of polluted groundwater; and include a completed NPDES application to discharge to surface waters, if such discharge is an element of the plan.

2) **COMPLETION DATE:** January 2, 1989

**TASK: COMPLETION OF INTERIM REMEDIAL ACTIONS:** Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.f.1).

g. 1) **COMPLETION DATE:** April 3, 1989

a) **TASK: EVALUATE INTERIM HYDRAULIC CONTAINMENT AND SOIL REMOVAL MEASURES:** Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim onsite hydraulic containment system. Such an evaluation shall include, but need not be limited to, an estimation of the pollutant capture zone of the cleanup system, establishment of the cones of depression by field measurements if groundwater extraction is proposed, and presentation of chemical monitoring data. This report shall also evaluate and document the removal and/or cleanup of polluted soils, if such removal and/or cleanup is an element of the remedial measure.

b) **MODIFICATION TO INTERIM ACTIONS:** Specific modifications to the system and an implementation time schedule shall be proposed in the event that the soil remediation or hydraulic control system is demonstrated not to be effective in containing and removing the onsite pollutants.

2) **COMPLETION DATE:** June 5, 1989

**TASK: COMPLETION OF MODIFICATIONS TO INTERIM ACTIONS:** Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.g.1) b).

h. **COMPLETION DATE:** June 5, 1990

**TASK: PROPOSED FINAL CLEANUP OBJECTIVES AND ACTIONS:**

Submit a technical report acceptable to the Executive Officer containing the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.

3. The submittal of technical reports evaluating immediate, interim and final remedial measures will include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The remedial investigation and feasibility study shall consider the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300); Section 25356.1 (c) of the California Health and Safety Code; CERCLA guidance documents with reference to Remedial Investigation, Feasibility Studies, and Removal Actions; the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California;" and the Regional Board staff's document entitled "Information to be Included in Proposals and Resultants Sampling Reports for Groundwater and Associated Soil Investigations."
4. If the dischargers are delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the dischargers shall promptly notify the Executive Officer and the Board may consider revision to this Order.
5. Technical reports on compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted monthly to the Board commencing on April 15, 1988 and covering the previous month. On a monthly basis thereafter, these reports shall consist of a letter report that, (1) summarizes work completed since submittal of the previous report, and work projected to be completed by the time of the next report, (2) identifies any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles, and (3) includes, in the event of non-compliance with Provision C.2. or any other Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order.



On a quarterly basis, commencing on April 15, 1988, technical reports shall be submitted which include, but need not be limited to, water level measurements taken quarterly and piezometric maps for all affected water bearing zones, maps indicating horizontal and vertical plume migration, cross-sectional geological maps describing the hydrogeological setting of the site and appropriately scaled and detailed base maps showing the location of all monitoring wells and extraction wells, and identifying adjacent facilities and structures.

6. The dischargers shall submit to the Board according to the schedule shown below, technical reports acceptable to the Executive Officer containing Quality Assurance Project Plans, Site Safety Plans, and Site Sampling Plans. The Quality Assurance Project Plans, Site Safety Plans, and Site Sampling Plans format and contents shall consider CERCLA regulations and guidance documents.

Technical Report

Date Due

- a. Site Sampling Plan
- b. Site Safety Plan

with all proposals  
June 1, 1988


7. All hydrogeological plans, specifications, reports, and documents shall be signed by or stamped with the seal of a registered geologist, engineering geologist or professional engineer.
8. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.
9. The dischargers shall maintain in good working order, and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.
10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies and company:
  - a. Santa Clara Valley Water District
  - b. Santa Clara County Health Department
  - c. City of Santa Clara
  - d. State Department of Health Services/TSCD
  - e. CAMSI IV (property owner)

The Executive Officer may additionally require copies of correspondence, reports and documents pertaining to compliance with the Prohibitions, Specifications, and

Provisions of this Order to be provided to the U.S. Environmental Protection Agency, Region IX, and to a local repository for public use.

11. If the Executive Officer determines and notifies CAMSI IV that Hunter, HTAC and Monsanto have failed to comply with this paragraph, CAMSI IV, as landowner, shall comply with this Provision within ninety days. Nothing in this paragraph is intended nor shall be construed as relieving Hunter, HTAC and Monsanto of their liability.
12. The dischargers shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:
  - a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
  - b. Access to copy any records required to be kept under the terms and conditions of this Order.
  - c. Inspection of any monitoring equipment or methodology implemented in response to this Order.
  - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
13. CAMSI IV shall file a report on any changes in site occupancy and ownership associated with the facility described in this Order.
14. If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge to this Regional Board, at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-business hours. A written report shall be filed with the Regional Board within five (5) working days and shall contain information relative to: the nature of waste or pollutant, quantity involved, duration of incident, cause of spill, Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and persons/agencies notified.
15. The Board will review this Order periodically and may revise the requirements when necessary.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 16, 1988.

  
for Roger B. James  
Executive Officer